CAMERON

TBV Series 2800
Split-Body, Full-Port, Flanged Ball Valve

TECHNOLOGY

CAMERON

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TBV SERIES 2800

SPLIT-BODY, FULL-PORT, FLANGED BALL VALVE

TBV Series 2800 Split-Body, Full-Port, Flanged Ball Valve

Millbury, Mass., USA

Cameron is a leading provider of valves and measurement systems to the oil and gas industry. Its products are used primarily to control, direct and measure the flow of oil and gas as it is moved from individual wellheads through flowlines, gathering lines and transmission systems to refineries, petrochemical plants and industrial centers for processing.

Cameron provides a wide range of valves for use in natural gas, LNG, crude oil and refined products transmission lines. The traditional CAMERON® fully welded ball valve product line has been combined with the GROVE®, RING-O®, TOM WHEATLEY®, ENTECH™ and TK® product lines. This broad offering has strengthened Cameron's ability to serve as a single source for a wide scope of customer requirements. Cameron also provides critical service valves for refinery, chemical and petrochemical processing businesses and for associated storage terminal applications, particularly through its ORBIT® and GENERAL VALVE® brands. These brands are complimented by WKM®, TBV™ and TEXSTEAM™ valve products, and considerably expand the scope of Cameron's product offerings.

TBV valve products are manufactured and assembled at Cameron's facility in Millbury, Mass. The TBV facility offers 100,000 sq ft of space, of which 80,000 sq ft is dedicated to manufacturing, assembling, testing, shipping and quality assurance. The increased manufacturing space has given Cameron the opportunity to expand its product offerings and size ranges. TBV is now competitive in the LNG, mining and petrochemical markets with its ability to offer larger size ranges in its line of products.

OVERVIEW

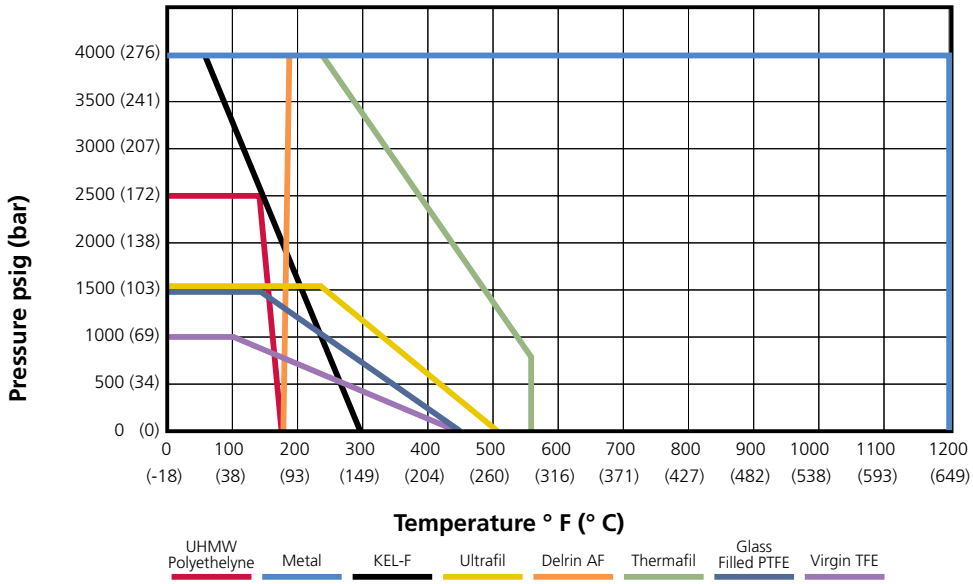
- ASME 150, 300, 600 (1/2" to 8")
- Applications: high cycles, category M, chlorine, thermal fluids, toxic media, steam, polymer lines, fugitive emissions services, high temperatures, insulated services or metal seats
- Full material traceability
- Standard live loaded dual-stem seal design on all sizes
- The body and bonnet are integrally cast as a single piece with no welds or crevices
- Fire-safe design in accordance to API 607 with soft seats upon request

Cameron's TBV Series 2800 split-body, full-port, flanged ball valve is specifically designed to tackle severe service applications. Materials include cast stainless steel, monel, hastelloy, titanium, alloy 20 and others as required. The TBV Series 2800 split-body, full-port, flanged ball valve combines its sealing technology and design expertise, with the versatility to solve even the most demanding applications. This technology is widely used in the chemical, petrochemical and refining industries, as well as many others where valve reliability is of the utmost importance. As with all TBV valves, quality, flexibility, long service life and safety make the TBV Series 2800 split-body, full-port, flanged ball valve the ultimate choice for your critical applications.

Design Specifications	
ASME B16.5	Pipe Flanges and Flanged Fitting
ASME B16.10	Face-to-Face Dimensions of Ferrous Valves
ASME B16.34	Steel Valves (Performance and Design)
ASME B31.1	Power Piping (Application)
ASME B31.3	Process Piping (Application)
Chlorine Institute Pamphlet 6	Piping System, Dry Chlorine
NACE MR0175	Sour Gas Service Applications
MSS. SP72	Federal Spec. WW-V-35 for Ball Valves
API 607	Fire-Tested for Soft-Seated Valves (Upon Request)
API 608	Upon Request

SEAT INFORMATION

Seat Rating Chart



- Extended pressures and temperatures may be achieved by altering design for specific applications. Consult Cameron with service conditions.

* The valve rating is the lesser of the body rating and the seat rating.

- Cameron manufactures an extensive line of high-pressure TBV valves capable of the full seat ratings shown. Consult Cameron for details.

C_v Coefficients	
Size	Full Port
1/2″	30
3/4″	50
1″	100
1-1/2″	170
2″	450
3″	1200
4″	2300
6″	5600
8″	10,000

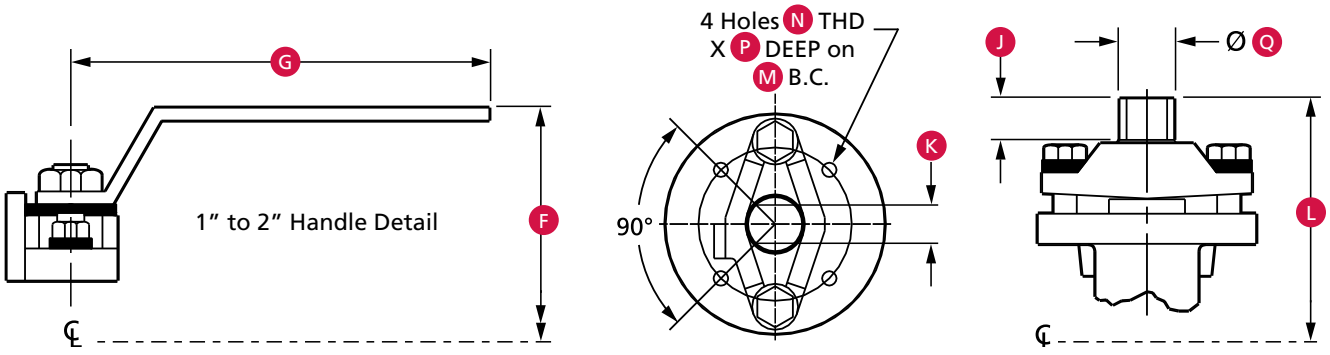
Notes

- C_v values are based on the flow of water at 60° F and 14.7 psig through the valve in US gal/min at a pressure drop of 1 psi.

Seat Material Identification Code	
T – Virgin PTFE	White
G – Reinforced PTFE	White with Red Speckles
U – Ultrafil	Black
F – Thermafil Black	(Carbon Filled PEEK)
M – Metal	Silver
C – Cryofil	White

FULL-PORT DIMENSIONS

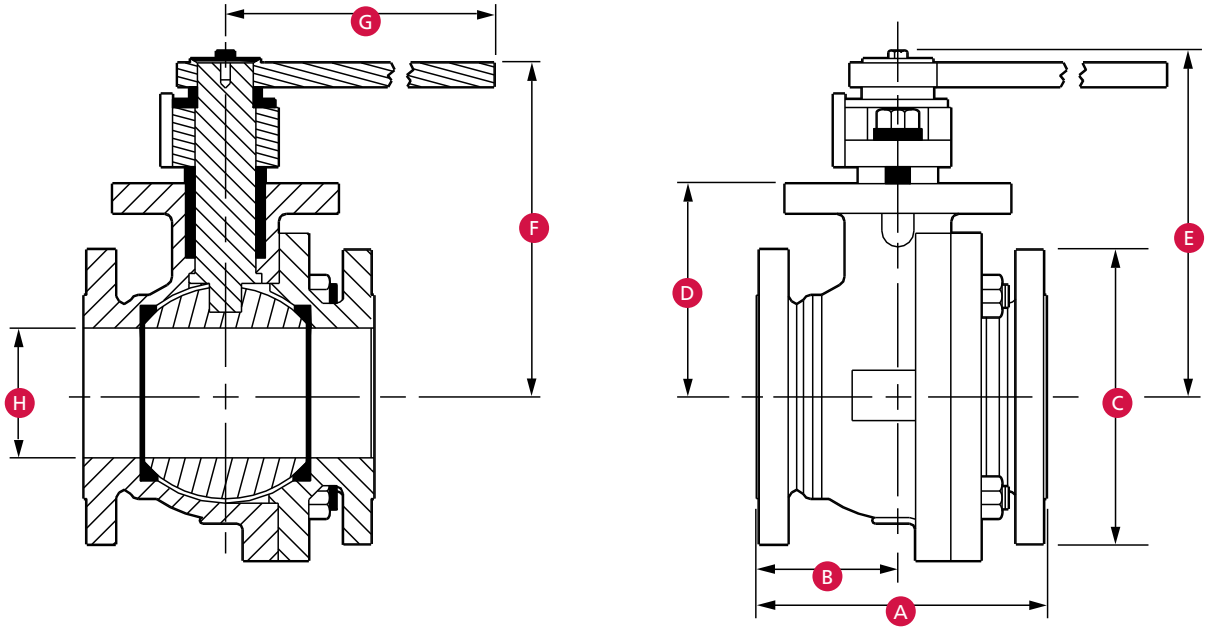
1/2" to 2"



Stem Seal

Leak-free stem sealing of the TBV Series 2800 split-body, full-port, flanged ball valve is provided by a dual-stem seal design. The packing is live-loaded, utilizing a gland plate with self-compensating Belleville washers and two adjustable gland bolts, virtually guaranteeing that the packing load will be retained throughout long life cycle of the valve. These features coupled with close tolerance machining of the dimension and finish of the packing bore, provide maximum stem seal life with minimum maintenance. Graphite packing also is available for fire-safe and high-temperature applications.

3" to 8"



FULL-PORT DIMENSIONS (CONT.)

Full Port ASME 150 Series 2800

Size	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q
1/2″	4.25	1.79	3.50	2.25	N/A	6.38	5.50	0.50	N/A	0.25	3.74	N/A	N/A	N/A	N/A
3/4″	4.62	1.96	3.88	2.50	N/A	6.77	8.50	0.75	N/A	0.30	4.27	N/A	N/A	N/A	N/A
1″	5.00	2.13	4.25	2.77	N/A	6.50	7.55	1.00	1.03	0.340	5.43	1.97	1/4-20 UNC	0.38	9/16
1-1/2″	6.50	2.78	5.00	2.86	N/A	6.52	7.55	1.44	0.88	0.440	5.54	2.76	5/16-18 UNC	0.50	5/8
2″	7.00	3.30	6.00	3.93	N/A	7.70	7.55	2.00	0.98	0.500	6.79	2.76	5/16-18 UNC	0.62	3/4
3″	8.00	3.83	7.50	5.11	8.32	7.96	17.88	3.00	0.82	0.995	7.90	4.02	3/8-16 UNC	0.65	1-3/8
4″	9.00	4.40	9.00	6.56	10.65	10.30	33.00	4.00	1.30	1.246	10.19	4.92	1/2-13 UNC	0.95	1-3/4
6″	15.50	6.88	11.00	8.10	12.19	11.84	33.00	6.00	1.30	1.246	11.73	5.51	5/8-11 UNC	0.95	1-3/4
8″	18.00	8.29	13.50	11.81	N/A	N/A	N/A	8.00	1.75	1.745	17.46	6.50	3/4-10 UNC	1.50	2-1/2

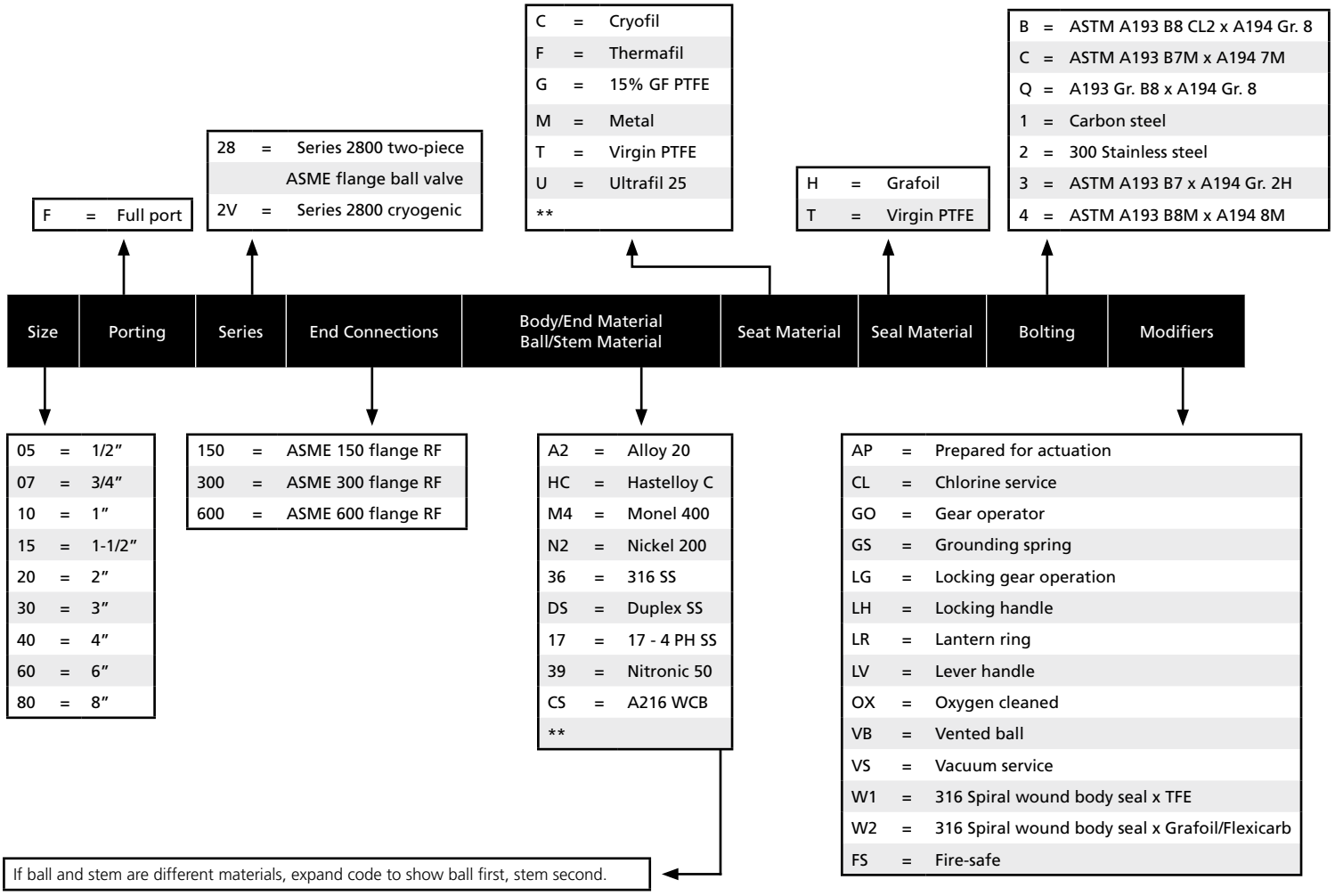
Full Port ASME 300 Series 2800

Size	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q
1/2″	5.53	2.24	3.75	2.25	N/A	6.38	5.50	0.50	N/A	0.23	3.74	N/A	N/A	N/A	N/A
3/4″	6.00	2.50	4.62	2.50	N/A	6.77	8.50	0.75	N/A	0.30	4.27	N/A	N/A	N/A	N/A
1″	6.50	2.75	4.88	2.77	N/A	6.50	7.55	1.00	1.03	0.340	5.43	1.97	1/4-20 UNC	0.38	9/16
1-1/2″	7.50	3.38	6.12	2.86	N/A	6.52	7.55	1.44	0.88	0.440	5.54	2.76	5/16-18 unc	0.50	5/8
2″	8.50	3.50	6.50	3.93	N/A	7.70	7.55	2.00	0.98	0.500	6.79	2.76	5/16-18 unc	0.62	3/4
3″	11.12	4.60	8.25	5.11	8.32	7.96	17.88	3.00	0.82	0.995	7.90	4.02	3/8-16 UNC	0.65	1-3/8
4″	12.00	5.13	10.00	6.56	10.65	10.30	33.00	4.00	1.30	1.246	10.19	4.92	1/2-13 UNC	0.95	1-3/4
6″	15.88	6.88	12.50	8.10	12.19	11.84	33.00	6.00	1.30	1.246	11.73	5.51	5/8-11 UNC	0.95	1-3/4
8″	19.75	8.97	15.00	11.81	N/A	N/A	N/A	8.00	1.75	1.745	17.46	6.50	3/4-10 UNC	1.50	2-1/2

Full Port ASME 600 Series 2800

Size	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q
1/2″	6.50	2.79	3.75	2.25	N/A	6.38	5.50	0.50	N/A	0.23	3.77	N/A	N/A	N/A	N/A
3/4″	7.50	3.32	4.62	2.50	N/A	6.77	8.50	0.75	N/A	0.30	4.27	N/A	N/A	N/A	N/A
1″	8.50	3.23	4.88	2.81	N/A	6.42	7.55	1.00	N/A	0.34	5.46	N/A	N/A	N/A	N/A
1-1/2″	9.50	3.75	6.12	3.56	N/A	7.33	7.55	1.50	N/A	0.44	6.27	N/A	N/A	N/A	N/A
2″	11.50	4.38	6.50	4.25	N/A	7.94	11.4	11.40	2.00	0.500	7.02	N/A	N/A	N/A	N/A
3″	14.00	5.21	8.25	5.11	8.32	7.96	17.88	3.00	0.82	0.995	7.90	4.02	3/8-16 UNC	0.65	1-3/8
4″	17.00	6.32	10.75	6.56	10.65	10.30	33.00	4.00	1.30	1.246	10.19	4.92	1/2-13 UNC	0.95	1-3/4
6″	22.00	8.47	14.00	8.10	12.19	11.84	33.00	6.00	1.30	1.246	11.73	5.51	5/8-11 UNC	0.95	1-3/4
8″	26.00	10.82	16.50	11.81	N/A	N/A	N/A	8.00	1.75	1.745	17.46	6.50	3/4-10 UNC	1.50	2-1/2

HOW TO ORDER



** Consult Cameron for other materials.
For additional ordering information, see the TBV valves brochure, corrosion-resistant and cryogenic valves.

Example:

20F 28 300 N2N2 TT 2LH = 2" full-port Series 2800 valve with ASME Class 300 end connections with a nickel body/end, nickel ball and stem, virgin PTFE seats and seals, stainless steel bolting with a locking handle.

HOW TO ORDER (CONT.)

Service Related Options
Steam Service – Saturated steam can be handled within the following limits: 250 psi/406° F with Ultrafil seats 450 psi/459° F with Thermafil seats Super heated steam up to 489° F can be handled at lower pressures
Vacuum Service – Standard TBV valves rated up to 20 microns of absolute pressure, specially prepared valves rated to 0.01 microns
Oxygen, chlorine cleaning and other special service cleanings are available
Actuation and actuator prepping available – consult Cameron
Leakage Rates – Soft seats are bubble-tight exceeding API 598 and Class VI requirements of ASME B16.104
Cryogenic service to -425° F is available with 21/28 (2V)

Special Services
Chlorine service
Oxygen service
Hydrofluoric acid
High temperature to 1200° F
Slurries
Body cavity fillers
Vacuum sealing
Toxic service
Erosive media
Monomers
Category M

Certifications

Contact Cameron for current terms and conditions and trademark information.

CAMSERV™ Aftermarket Services for Valves and Actuation

WE BUILD IT. WE BACK IT.

Global Network and Local Support

Cameron is well-positioned to deliver total aftermarket support, quickly and efficiently, with unmatched OEM expertise. Our highly skilled engineers and technicians are available around the clock, seven days a week, to respond to customer queries, troubleshoot problems and offer reliable solutions.

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- OEM spare valves, actuators and parts (including non-Cameron brands)
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- Remanufacturing
- Asset preservation
- Customer property management
- Training and recertification services
- Warranty

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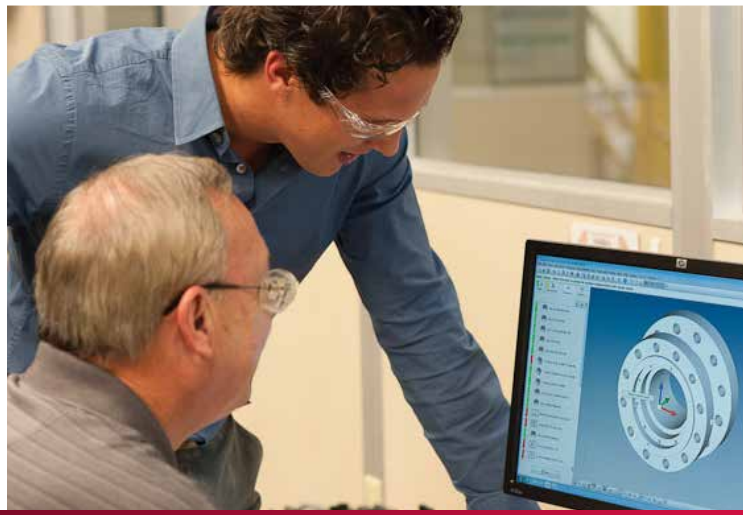
Customized asset management plans that optimize uptime, availability and dedicated services.

- Engineering consultancy
- Site management
- Flange management
- Startup and commissioning
- Spare parts and asset management
- Operational support



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HSE Policy Statement
At Cameron, we are committed ethically, financially and personally to a working environment where no one gets hurt and nothing gets harmed.